CAREX



Sediments

Stop sediment at the source & address sediment legacies

Handouts

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Excessive fine sediment can clog stream beds, enable aquatic weed growth and reduce habitat for aquatic organisms. Sediment enters waterways from many sources, such as livestock trampling, run-off from paddocks, bank erosion and tile drains. Overtime, sediment can accumulate and create legacies that remain in the waterway.



Bank rebattering is a tool to reduce sediments entering the waterway by removing sources along the bank, such as oversteepened or eroding banks.

How does rebattering work? Bank rebattering involves earthworks to reduce the slope and stabilise the bank. This stops bank collapse, reduces erosion, and increases the flood capacity of the waterway.

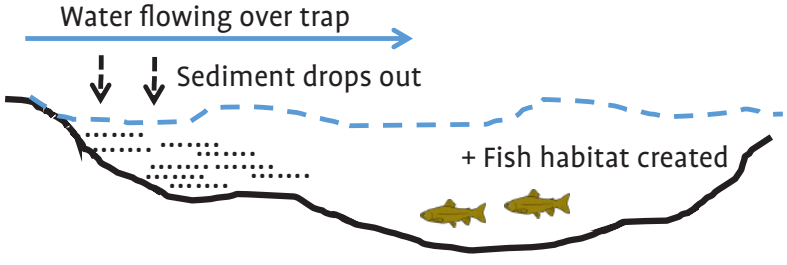
TIP *Rebattered banks should be planted or seeded with grass to maximise ground cover and reduce bare ground.*



Sediment traps are a tool that capture sediments already in the waterway and can be cleaned out to remove sediment legacies.

How do sediment traps work? Sediment traps are dug into the waterway bed in areas where sediment enters or builds up. Water slows down as it flows over the trap and fine sediment drops out.

TIP *Traps need to be cleaned out regularly by a digger to keep them working effectively.*



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Step by Step - Stop sediments at source & reduce legacies

1. Bank rebattering to remove sources of sediment into waterway



1. Know your waterway - *Identify problem bank areas where sediments are entering the waterway (e.g., oversteepeend banks, under hedges, collapsing banks).*



2. Design & plan - *Think about bank setback width and what is practical given on-farm requirements. Talk to contractor about earthworks and local council about resource consent (may be required).*



3. Site preparation - *To get banks ready for rebattering, you may need to remove hedges, cut down trees, or temporarily remove fences from the banks.*



4. Rebatter - *A digger is used for earthworks to pull back soil and reduce bank slopes (ideal slope 1:1) Excess soils can be used on farm or removed by truck.*



5. Plant or add groundcover - *Banks should be planted or seeded with grass to minimise bare ground (>50% plant cover is ideal).*



6. Monitor & maintain - *Monitor banks and maintain groundcover with plants or grass to minimise sediment runoff into waterway.*

2. Sediment traps to trap sediments in waterway and remove legacies



1. Know your waterway - *Dig traps near areas where sediments are entering and building up in the waterway and where a digger can easily access for routine maintenance.*



2. Install sediment traps - *A digger is used to dig traps, which should be 4 - 10 times as long as the wetted width of the waterway. Traps need to be long enough to reduce water velocity and allow fine sediment to drop out of water coloumn. Depth will depend on the size of the waterway. Sediment traps can be installed alone or in a series. Excess sediment can be used on farm or removed by truck.*



3. Monitor & maintain - *How often traps will need to be cleaned out will depend on sediment loads. Monitor sediment levels in trap and clean out when ~70-80% full. At a minimum, clean out traps once a year in autumn. Recover fish and mussels from removed sediment and return to waterway.*

For more details and steps to get you started, please check out our other handouts.

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